

AMENDMENTS TO THE CLAIMS:

1. (Previously Presented) An interbody fusion spacer, comprising:
an elongated generally cylindrical body having a length and an outer circumferential surface defining an outer circumference, a first end wall, a second end wall and a side wall cooperating to define an interior chamber;
at least one of said first end wall and said second end wall having an end wall discontinuity;
a side wall discontinuity extending along at least about 50% of the length of said body and aligned with the end wall discontinuity and configured for nesting with an adjacent spacer;
and
said side wall discontinuity defining a side wall opening to said interior chamber, said side wall opening sized to extend over at least about 20% of the outer circumference of said body and along at least about 50% of the length of said body to provide said side wall opening with a size sufficient for loading osteogenic material into said interior chamber; and
said side wall defining a plurality of secondary bone ingrowth openings extending through said outer circumferential surface and into said interior chamber to facilitate bone ingrowth into said interior chamber, said plurality of secondary bone ingrowth openings sized smaller than said side wall opening.
2. (Original) The spacer of claim 1 wherein said body is comprised of metal.
- 3.-5. (Cancelled)
6. (Previously Presented) The spacer of claim 1, wherein one of said end walls defines a tool engaging hole for receiving a driving tool for implanting the spacer.
7. (Previously Presented) The spacer of claim 1, further comprising an osteogenic material disposed within said chamber.

8. (Original) The spacer of claim 7, wherein said osteogenic material comprises demineralized bone, a calcium phosphate material, a bioceramic, bioglass, an osteoinductive factor and mixtures thereof.

9. (Previously Presented) The spacer of claim 1, wherein extension of said side wall opening does not exceed about 50% of the circumference of said body.

10. (Previously Presented) The spacer of claim 1, wherein said side wall discontinuity extends over at least about 20% of the circumference of said body but not exceeding about 40% of the circumference of said body.

11. (Cancelled)

12. (Cancelled)

13. (Previously Presented) An interbody fusion spacer, comprising:
an elongated generally cylindrical body having a length and an outer circumferential surface defining an outer circumference, a first end, a second end and a side wall connecting said first end and said second end, said body defining an interior chamber;

a side wall discontinuity extending along at least about 50% of the length of said body and configured for nesting with an adjacent spacer; and

said side wall discontinuity defining a side wall opening to said interior chamber; and
wherein said side wall opening is sized to extend over at least about 20% of the outer circumference of said body and along at least about 50% of said length of said body to provide said side wall opening with a size sufficient for loading osteogenic material into said interior chamber; and

said side wall defining a plurality of secondary bone ingrowth openings extending through said outer circumferential surface and into said interior chamber to facilitate bone

ingrowth into said interior chamber, said plurality of secondary bone ingrowth openings sized smaller than said side wall opening.

14. (Original) The spacer of claim 1, wherein said end wall discontinuity defines a concave surface.

15. (Original) The spacer of claim 1, wherein said end wall discontinuity is configured for nesting with an adjacent spacer.

16. (Cancelled)

17. (Previously Presented) The spacer of claim 1, wherein each of said first and second end walls defines a concave end wall discontinuity, and wherein each of said concave end wall discontinuities is configured to receive an outer convex surface of an adjacent spacer.

18. (Previously Presented) The spacer of claim 1, wherein each of said end walls are configured for nesting with an adjacent spacer to form a spacer assembly having a width less than the sum of the combined maximum diameters of said spacers.

19. (Cancelled)

20. (Previously Presented) An interbody fusion implant system, comprising:
the interbody fusion spacer of claim 1; and
a second interbody fusion spacer having a second elongated body nested within said side wall discontinuity of the interbody fusion spacer of claim 1.

21.-51. (Cancelled)

52. (Previously Presented) An interbody fusion spacer, comprising:

an elongate, generally cylindrical body having a length and an outer circumferential surface defining an outer circumference, external threads and comprised of metal and having end walls and a side wall extending between said end walls, said side wall and said end walls defining an interior chamber, said side wall defining a main side wall opening to said interior chamber and configured to extend over at least about 20% of the outer circumference of said body and along at least about 50% of the length of said body to provide said main side wall opening with a size sufficient for loading osteogenic material into said interior chamber, said side wall further defining a plurality of secondary side wall openings extending through said outer circumferential surface and communicating with said interior chamber to facilitate bone ingrowth into said interior chamber, said plurality of secondary side wall openings sized smaller than said main side wall opening;

said end walls each having an external profile comprising a first portion defining an arc of a circle, said arc extending from 180° to 324° around the circle, said external profile also comprising a second portion defining a concave surface with said main side wall opening extending through said concave surface and into communication with said interior chamber;

said side wall having an external profile defining an arc of a circle, said arc extending from 180° to 324° around the circle and aligned with the arc defined by said end walls.

53. (Cancelled)

54. (Previously Presented) The interbody fusion spacer of claim 52, wherein said end walls are formed integral with said side wall.

55. (Cancelled)

56. (Previously Presented) The interbody fusion spacer of claim 52, wherein said side wall has surface features for resisting expulsion from an intervertebral space.

57. (Cancelled)

58. (Cancelled)

59. (Previously Presented) The spacer of claim 1, wherein said outer circumferential surface defines threaded bone engaging portions.

60. (Cancelled)

61. (Previously Presented) The spacer of claim 1, wherein each of said first and second end walls defines an end wall discontinuity aligned with said side wall discontinuity.

62. (Previously Presented) The spacer of claim 13, wherein said outer circumferential surface defines threaded bone engaging portions.

63. (Previously Presented) The spacer of claim 13, wherein said first end comprises a first end wall, said second end comprising a second end wall, each of said first and second end walls cooperating with said side wall to define said interior chamber.

64. (Currently Amended) The spacer of claim 63, wherein each of said first and second end walls are formed integral with said side wall, and wherein said first and second end walls are fixed and non-removable relative to said elongated body.

65. (Cancelled)

66. (Previously Presented) The spacer of claim 63, wherein at least one of said first and second end walls defines an end wall discontinuity aligned with said side wall discontinuity.

67. (Previously Presented) The spacer of claim 66, wherein said end wall discontinuity defines a concave surface that is configured for nesting with an adjacent spacer.

68. (Previously Presented) The spacer of claim 13, further comprising an osteogenic material disposed within said interior chamber.

69.-74. (Cancelled)

75. (Previously Presented) The spacer of claim 52, wherein said plurality of secondary side wall openings extends through said external threads and into communication with said interior chamber.

76.-82. (Cancelled)

83. (Currently Amended) ~~The interbody fusion spacer of claim 1~~ An interbody fusion spacer, comprising:

an elongated generally cylindrical body having a length and an outer circumferential surface defining an outer circumference, a first end wall, a second end wall and a side wall cooperating to define an interior chamber, wherein said first and second end walls are fixed and non-removable relative to said elongated body;

at least one of said first end wall and said second end wall having an end wall discontinuity;

a side wall discontinuity extending along at least about 50% of the length of said body and aligned with the end wall discontinuity and configured for nesting with an adjacent spacer;
and

said side wall discontinuity defining a side wall opening to said interior chamber, said side wall opening sized to extend over at least about 20% of the outer circumference of said body and along at least about 50% of the length of said body to provide said side wall opening with a size sufficient for loading osteogenic material into said interior chamber; and

said side wall defining a plurality of secondary bone ingrowth openings extending through said outer circumferential surface and into said interior chamber to facilitate bone ingrowth into said interior chamber, said plurality of secondary bone ingrowth openings sized smaller than said side wall opening.

84. (Previously Presented) The interbody fusion spacer of claim 1, wherein said first and second end walls are formed integral with said side wall.

85. (Previously Presented) The interbody fusion spacer of claim 1, wherein said side wall opening is sized to extend along at least about 80% of the length of said body.

86. (Previously Presented) The interbody fusion spacer of claim 1, wherein said side discontinuity is sized to extend along at least about 80% of the length of said body.

87. (Previously Presented) The interbody fusion spacer of claim 86, wherein said side discontinuity spans substantially the entire length of said body.

88. (Previously Presented) The interbody fusion spacer of claim 13, wherein said side wall opening is sized to extend along at least about 80% of the length of said body.

89. (Previously Presented) The interbody fusion spacer of claim 13, wherein said side discontinuity is sized to extend along at least about 80% of the length of said body.

90. (Previously Presented) The interbody fusion spacer of claim 89, wherein said side discontinuity spans substantially the entire length of said body.

91. (Currently Amended) ~~The interbody fusion spacer of claim 52~~ An interbody fusion spacer, comprising:

an elongate, generally cylindrical body having a length and an outer circumferential surface defining an outer circumference, external threads and comprised of metal and having end walls and a side wall extending between said end walls, said side wall and said end walls defining an interior chamber, said side wall defining a main side wall opening to said interior chamber and configured to extend over at least about 20% of the outer circumference of said body and along at least about 50% of the length of said body to provide said main side wall opening with a size sufficient for loading osteogenic material into said interior chamber, said side wall further defining a plurality of secondary side wall openings extending through said outer circumferential surface and communicating with said interior chamber to facilitate bone ingrowth into said interior chamber, said plurality of secondary side wall openings sized smaller than said main side wall opening, wherein said end walls are fixed and non-removable relative to said elongated body;

said end walls each having an external profile comprising a first portion defining an arc of a circle, said arc extending from 180° to 324° around the circle, said external profile also comprising a second portion defining a concave surface with said main side wall opening extending through said concave surface and into communication with said interior chamber;

said side wall having an external profile defining an arc of a circle, said arc extending from 180° to 324° around the circle and aligned with the arc defined by said end walls.

92. (Previously Presented) The interbody fusion spacer of claim 52, wherein said side wall opening is sized to extend along at least about 80% of the length of said body.

93. (New) The interbody fusion spacer of claim 85, wherein said side wall opening is sized to extend along substantially the entire length of said body.

94. (New) The interbody fusion spacer of claim 89, wherein said side wall opening is sized to extend along substantially the entire length of said body.

95. (New) The interbody fusion spacer of claim 92, wherein said side wall opening is sized to extend along substantially the entire length of said body.